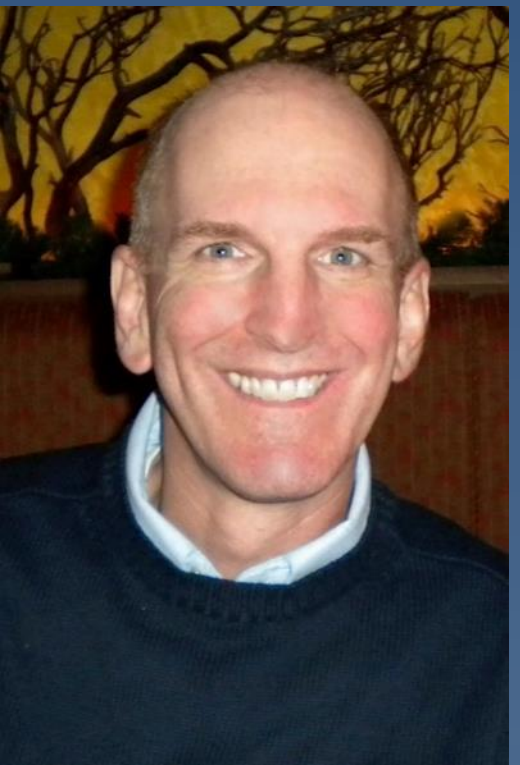
United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

Recording Keeping It's Not Just Spreadsheets Anymore



By Kevin Ogles
USDA NRCS ENTSC Grazing Lands Specialist
June 29, 2016 Webinar

Today's Webinars Rules:

This webinar was made for the audience of NRCS employees providing conservation planning on Grazing Lands, especially in the Eastern United States

Some of my comments will be addressing situations that involve introduced pasture forages in areas of the Eastern U.S. receiving rainfall from 35 to 65+ inches annually.

Why Does NRCS Care about Grazing Management Records Anyway?

What do we really know about our clientele that we are asking to keep records on Prescribed Grazing and other practices?

What are livestock producers using to keep records and why?

Knowing all this should we require one type of compatibility with the NRCS record keeping system for Grazing Management (528) documentation?

It’s Part of our 9 steps of Conservation Planning

With management practices such as (528) Prescribed Grazing, this involves looking at records and not just measurements. We are working with plants that can change quickly – growth spurt, dormancy (drought), stagnate, die.

It's Part of our 9 steps of Conservation Planning

Step 8 – Implement the Plan

One of the final activities for NRCS is to Document the practice has been completed. - Title 180 – NPPH

Step 9 - Evaluate the Plan

One of the activities is to "Determine if the practices and management systems are solving the identified resource concerns. - Title 180 – NPPH

It's Required in our National and State 528 Prescribed Grazing standards such as:

Forage-Animal Balance . . . . . .
. . . . . Identifies periods of grazing and/or . . . . rest . . .
Monitoring plan . . . . .with appropriate records . . .
determining whether the grazing strategy . . . . . is
meeting the objectives . . . . of the plan.

The Operation and Maintenance section actually uses the terms 'grazing records will be used'.

Title 440 – Conservation Programs Manual

Part 512 – Conservation Program Contracting

Subpart F – Contract Administration

512.56 Practice Documentation, Certification, and Quality Assurance says:

Conservation treatment installed under contracts will be assessed as specified in Title 450, General Manual (GM), Part 407, 340-GM, Part 404, and State supplements to these parts of the GM. To ensure practices are completed as certified on the form NRCS-CPS-1245 “Practice Approval and Payment Application”, job sheets, checkout notes or other adequate supporting documentation must be provided by the contractor, technical service provider, NRCS personnel, or other qualified individuals as per 450-GM, Part 407.

Title 450 – General Manual

407.11 Certifying Completed Work

. . . . . .certifying conservation practices will include

1. What practice or activity was installed . . . . . .
2. Location of installed practice . . . . . .
3. Quantity installed or applied amount . . . . .
4. Statement that the practice meets NRCS standards and specifications signed and dated . . . . . .

Sampling can be used to record supporting data . . . . .

<u>The Checker is to be satisfied that the entire job meets specifications and is to record supporting data</u>

What do We Really know about our Clientele that we are asking to keep records on Prescribed Grazing and other practices?

What are livestock producers using to keep records and why?

Knowing all this should we require one type of compatibility with the NRCS record keeping system for Grazing Management (528) documentation?

U.S. Farmer Demographics

- In 2012, U.S. farmers were older and more diverse than in 2007, the last time the agriculture census was conducted. The total number of farmers declined, with the percentage decline more for women than men. More minorities operated farms in 2012, and the number of beginning farmers declined.

Source: USDA NASS, 2012 Census of Agriculture.

U.S. Farmer Demographics

- By Far, Most Are the World War II Generation or Baby Boomers.
- World War II Generation was
  - Born between 1901 and 1945
  - So today they are 71+ years of age
- Baby Boomers
  - Born between 1946 and ~1960
  - So today they are between 70 and ~56 years of age

Source: USDA NASS, 2012 Census of Agriculture.

U.S. Farmer Demographics

Table 2
Gender, Primary Occupation, and Years on Farm, 2012
(percent)

Farm	Gender		Primary Occupation		Years on Farm	
Operators	Male	Female	Farm	Other	<10	10+
Principal	86	14	48	52	22	78
Second	33	67	37	63	31	69
Third	61	39	43	57	45	55
All	70	30	44	56	26	74

Source: USDA NASS, 2012 Census of Agriculture. Compiled by Strategic Leadership Development Program Group of Kim Berry, Neil Dominy, Casey Sheley, and Jack Lewis

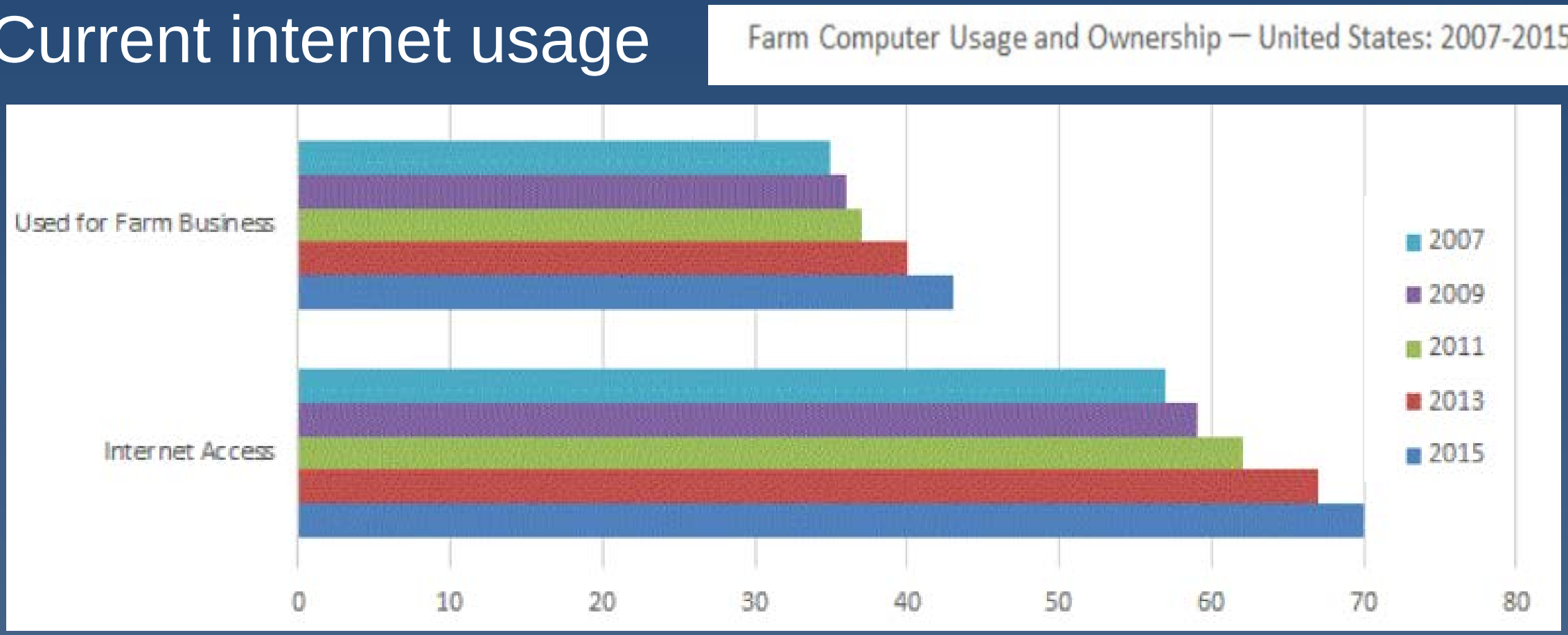
U.S. Farmer Demographics

Table 2
Gender, Primary Occupation, and Years on Farm, 2012
(percent)

Farm	Gender		Primary Occupation		Years on Farm	
Operators	Male	Female	Farm	Other	<10	10+
Principal	86	14	48	52	22	78
Second	33	67	37	63	31	69
Third	61	39	43	57	45	55
All	70	30	44	56	26	74

Source: USDA NASS, 2012 Census of Agriculture. Compiled by Strategic Leadership Development Program Group of Kim Berry, Neil Dominy, Casey Sheley, and Jack Lewis

Current internet usage



Farm Computer Usage and Ownership (August 2015)
USDA, National Agricultural Statistics Service Compiled by Strategic Leadership Development Program Group of Kim Berry, Neil Dominy, Casey Sheley, and Jack Lewis

U.S. Farmer Demographics

So How Many Is That?

Farm Operators	Full Time*	Avg. Age	Avg.Years On Farm	% Over Age 70
Primary Occupation	1,007,904	58.3	25	21

Computer Not Used For Farm Business	574,505
No Internet Use	302,371

Source: USDA NASS, 2012 Census of Agriculture.
*About 2 days or less per week off farm income

What are Livestock Producers using to Keep Records and Why?

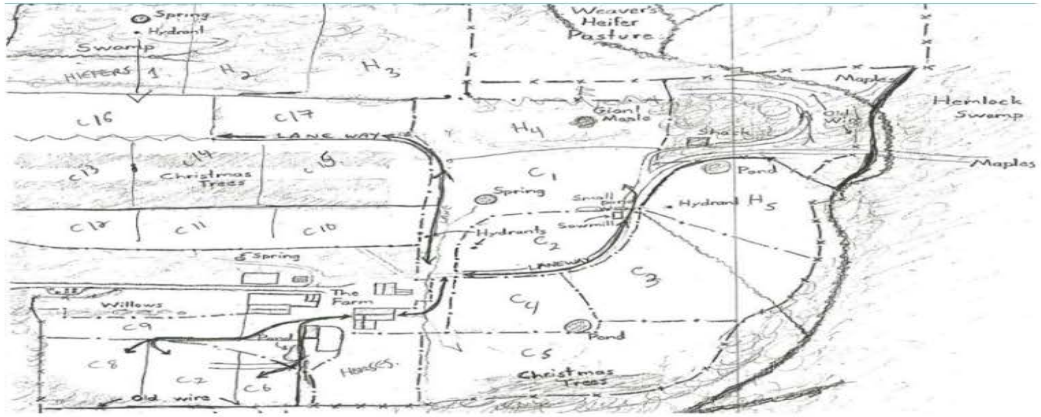
Knowing all this should we require one type of compatibility with the NRCS record keeping system for Grazing Management (528) documentation?

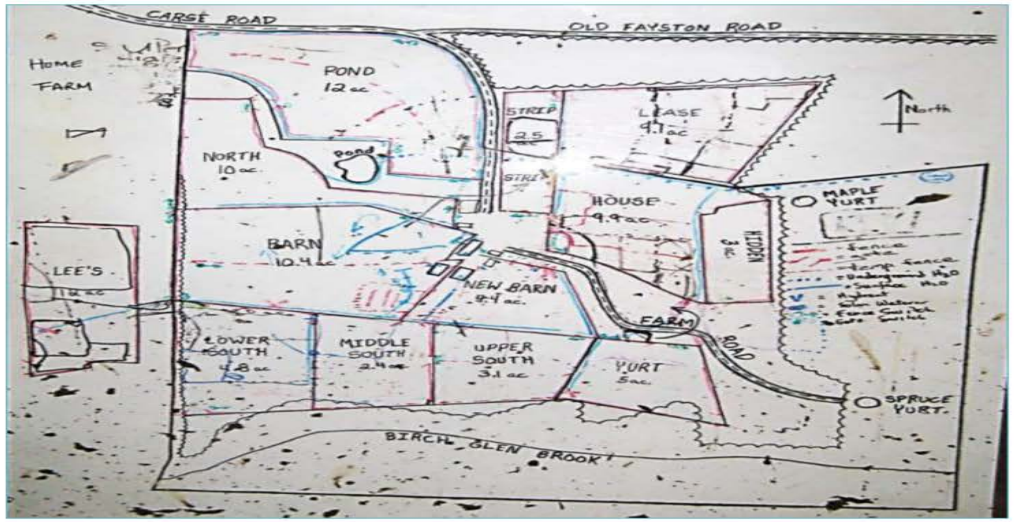
"If you don't measure it, you don't know what it really is"

"You can't manage what you don't measure"

information. That helps me make better decisions.

Here are some map examples from farms I've worked with. Note that not all use technology. If hand drawn maps work for you, that's great too. See how different maps identify resources important to the operator. (Click on the pictures for a larger view.)



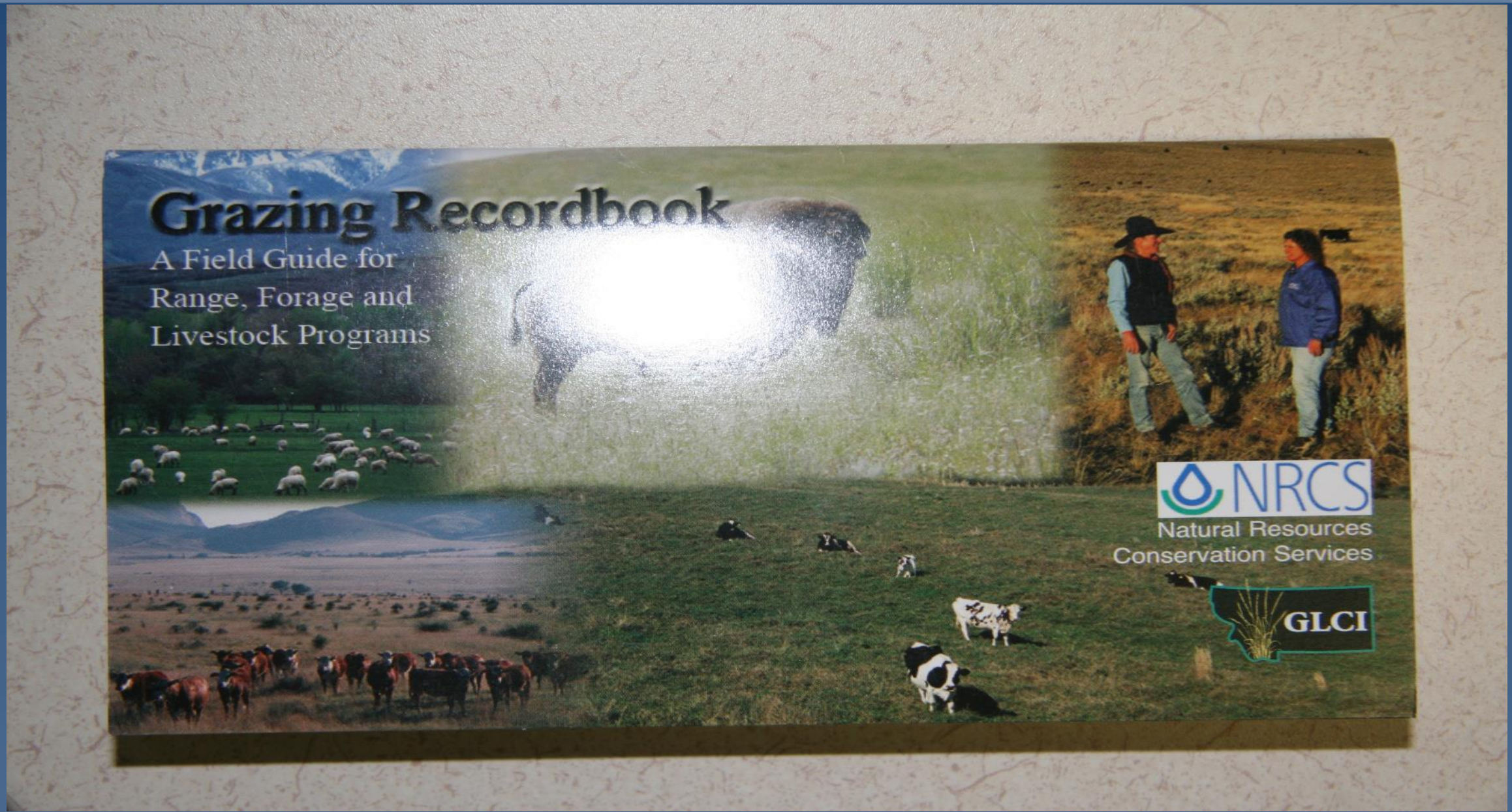


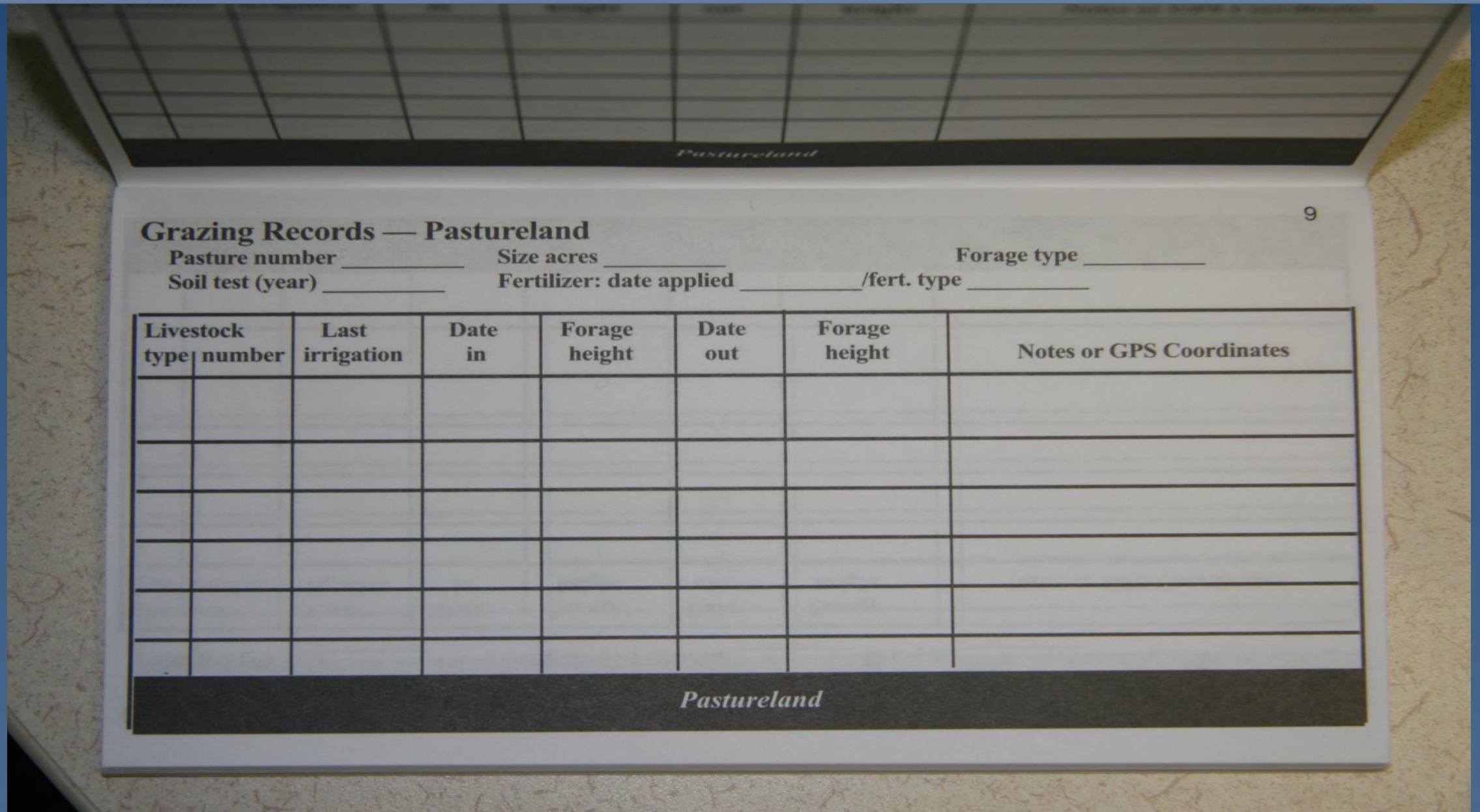
Pasture T Account

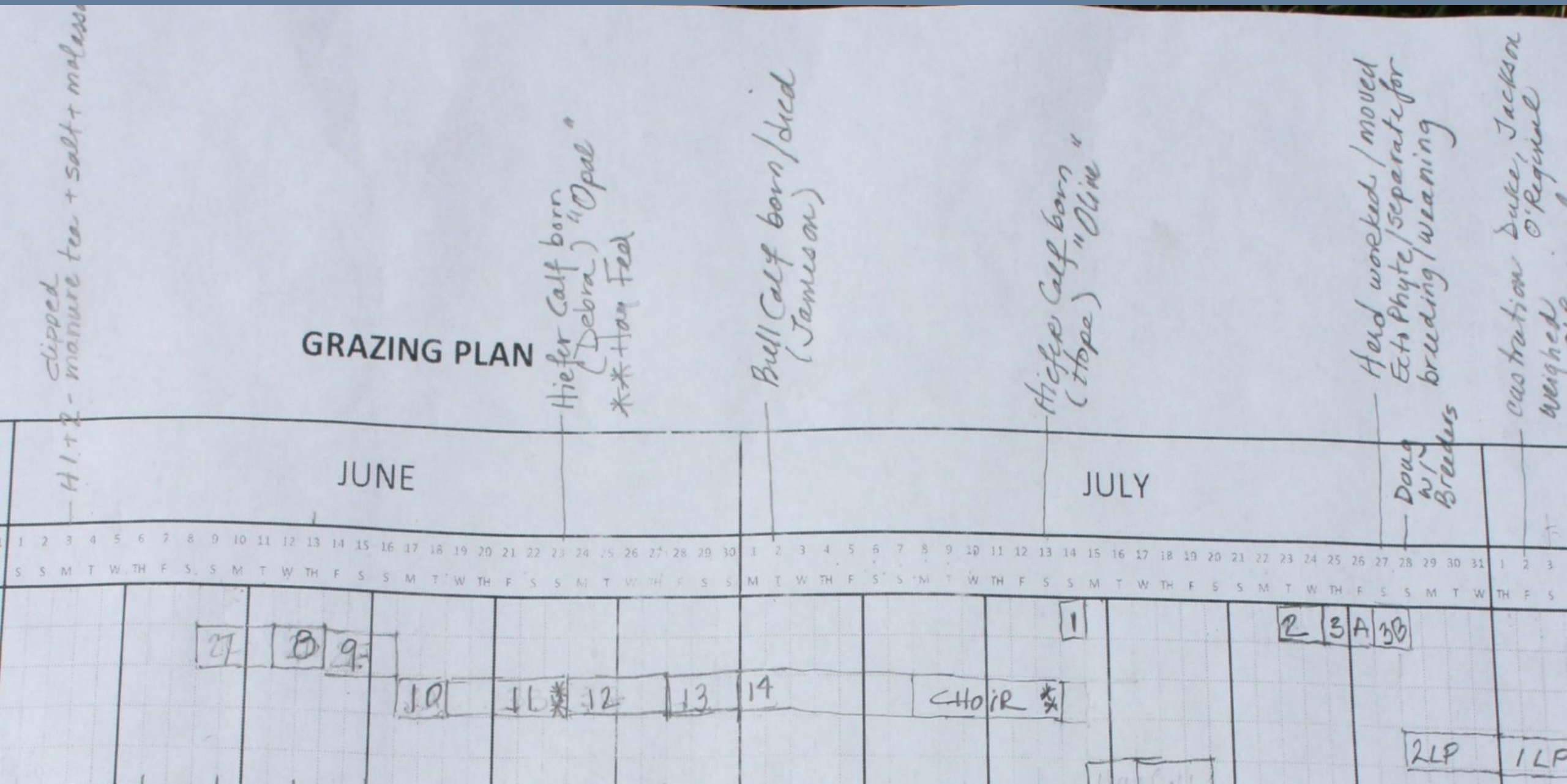
Date _____

By Cliff Hawbaker

Pasture/Hay Production		Forage Animal Demand	
Pasture ____ acre @__ t /ac	____	____ Milk Cows - 1000 lb (**1**) (**30** lb /cow /day) X 365 Divided by 2000 = **5.47**t	___
Hay ___ acre @__ t /ac	____	____ Heifers – 600 lb (.**6**) (**18** lb / heifer/day) x 365 Divided by 2000 = **3.28**t	___
Annuals ____ acre @__t	____	____ Calves - < 300 lb) (.**3**) (**9** lb / calf/day) x365 Divided by 2000 = **1.64t**	___
Purchased Hay ____ tons	____		
Hay on Hand	____		
Total	_____	Total	_____
Difference	____		


Grazing Recordbook
A Field Guide for
Range, Forage and
Livestock Programs
NRCS
Natural Resources
Conservation Services
GLCI

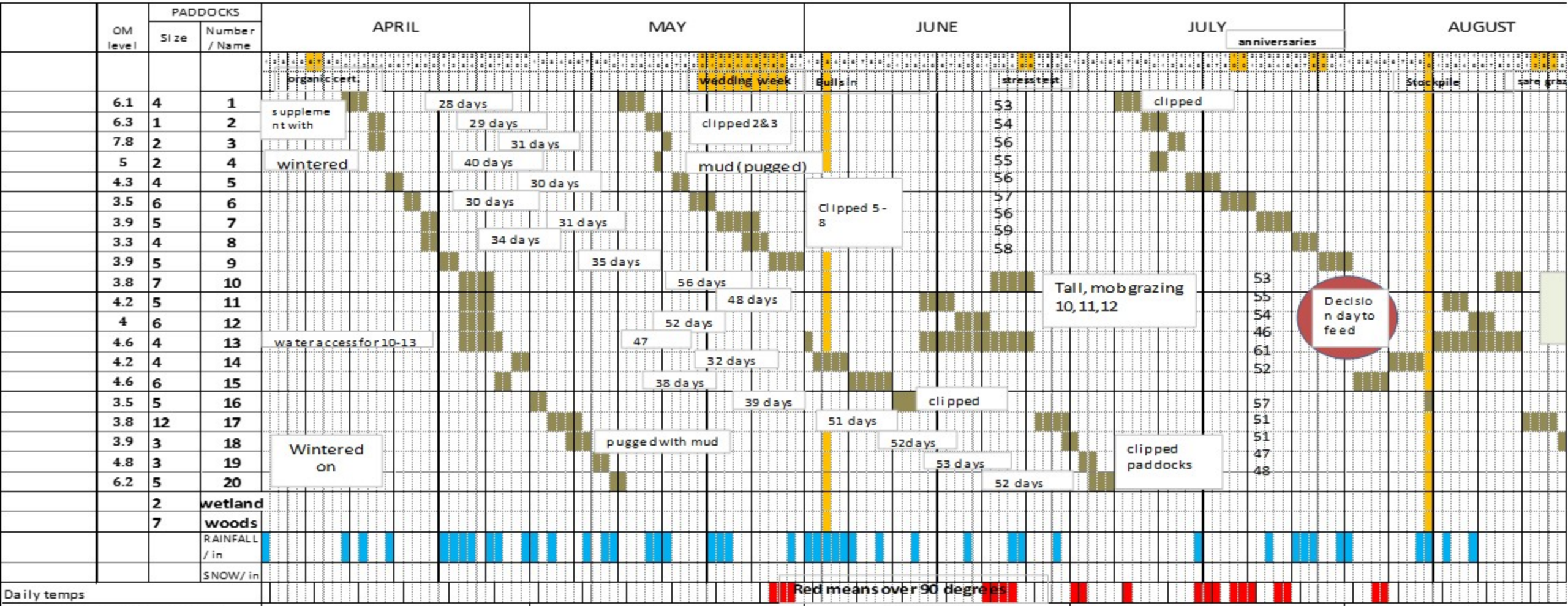

Pastureland
9
Grazing Records — Pastureland
Pasture number _____ Size acres _____ Forage type _____
Soil test (year) _____ Fertilizer: date applied _____/fert. type _____
Livestock type
number
Last irrigation
Date in
Forage height
Date out
Forage height
Notes or GPS Coordinates
Pastureland


GRAZING PLAN
JUNE
JULY
Hiefer Calf born (Debra) "Opal" *** Horn Fed
Bull Calf born/died (James on)
Hiffer Calf born (Hope) "Olive"
Herd worked/moved Ect. Phyte/separate for breeding/weaning
Doug w/ Breeders
Vaccination Duke, Jackson O'Regional
dipped
H1+2 - manure tea + salt + molas
27
28
9
10
11
12
13
14
CHOIR
1
2
3
A
3B
2LP
1LP

United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

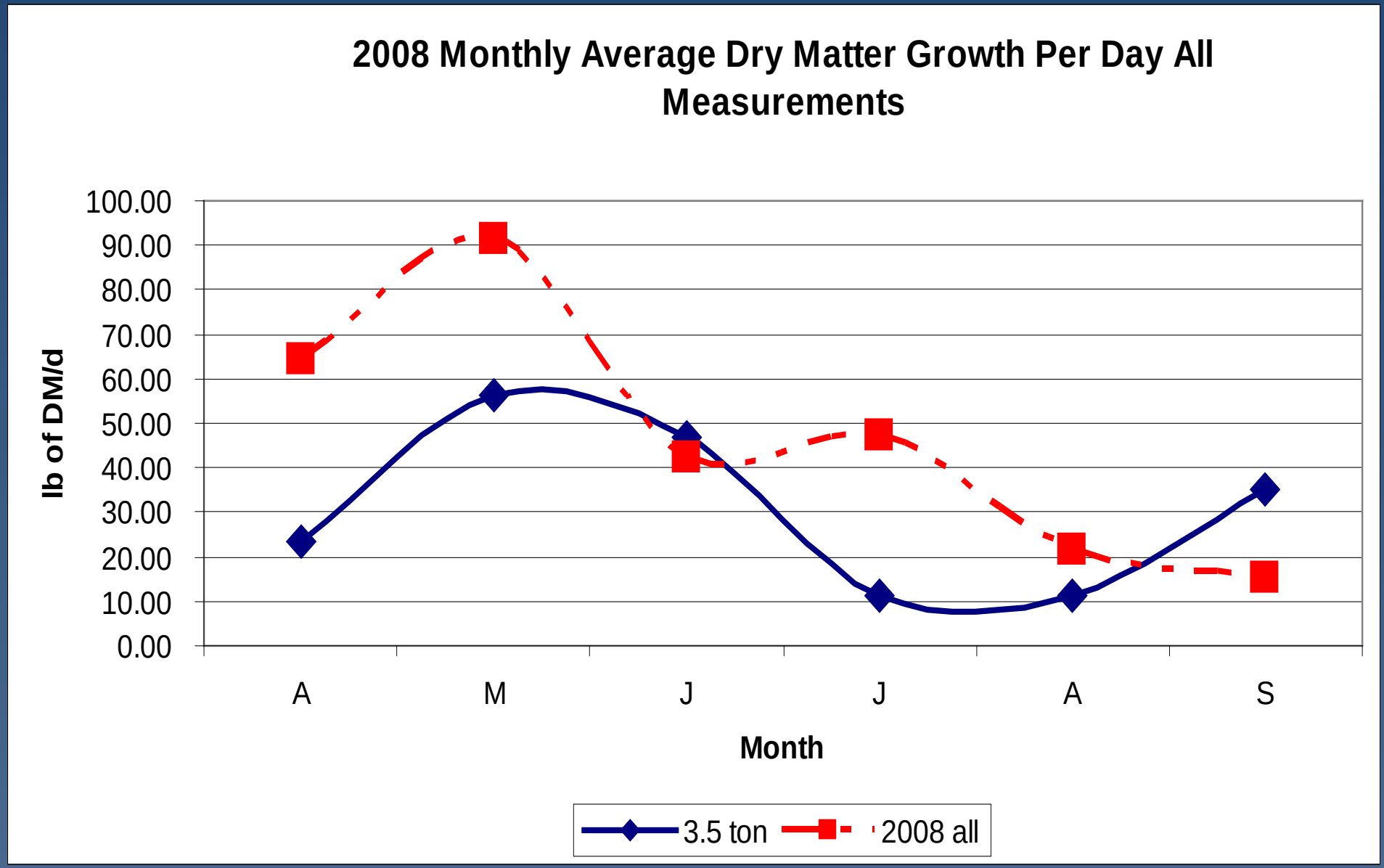
YEAR 2012-13 **GRAZING PLAN** **Bishopp Farm**

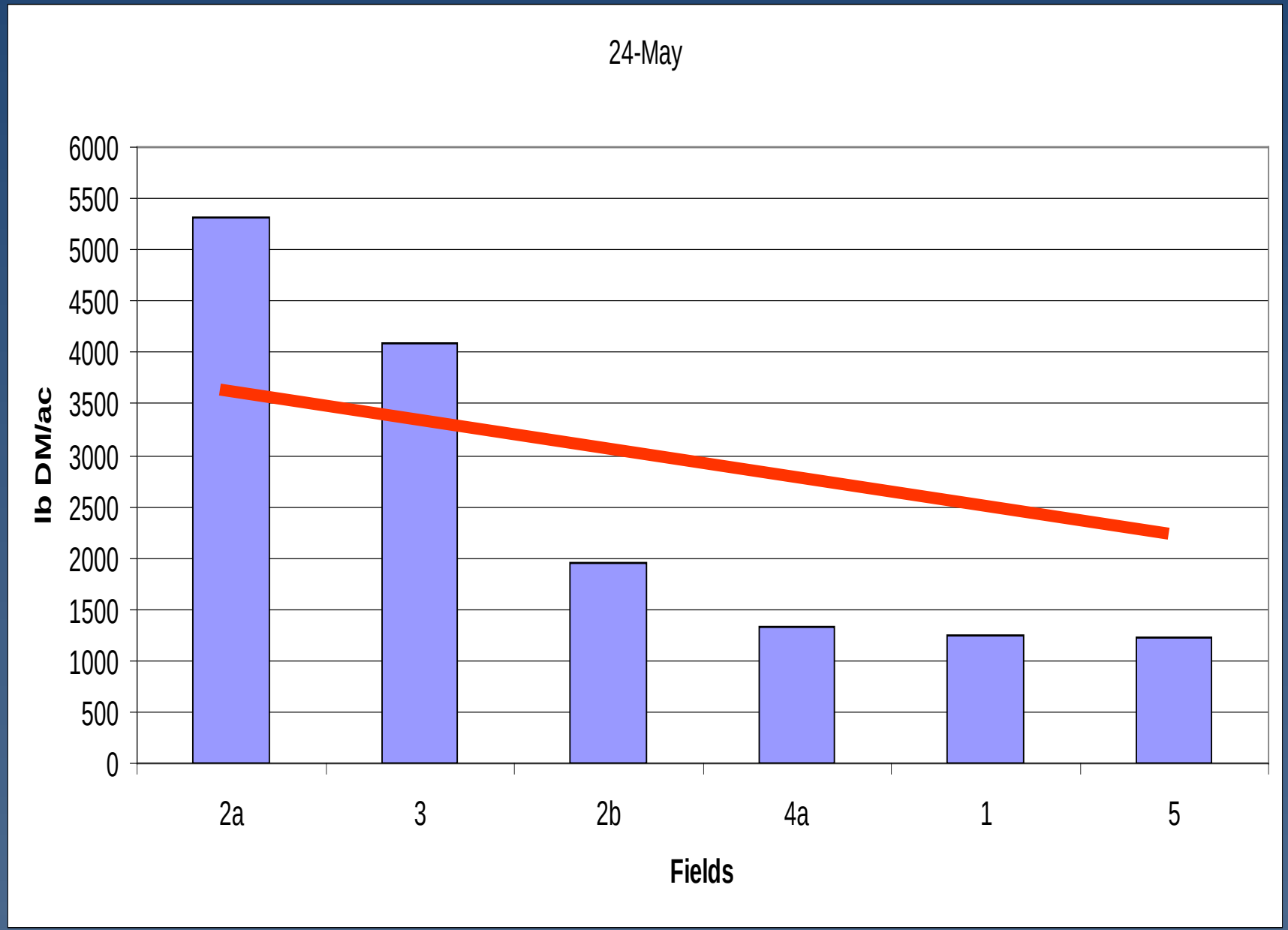


74 head dairy heifers @ 450lbs	Rain 3.1 inches	Rain 4.9 inches	Rain 2.2 inches	Rain 3.8 inches	Rain 2.5 inches
	DM Demand 1340lb/day	DM Demand 1450lb/day	DM Demand 1570lb/day	DM Demand 1738lb/day	DM Demand 1867lb/day

Ohio Pasture Measurement Project

- Graziers from across Ohio measured at least one pasture field each week during the grazing season.
- Measurements were also taken before and after grazing or clipping of that field.
- Measurements were taken with a commercially available rising plate meter.


2008 Monthly Average Dry Matter Growth Per Day All Measurements
lb of DM/d
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
A
M
J
J
A
S
Month
3.5 ton
2008 all


24-May
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
lb DM/ac
2a
3
2b
4a
1
5
Fields

Verizon 10:03 PM 69%

grazingwedge.missouri.edu

PastureMap | app.pasturemap.com/l... | www.exploresmc.org/e... | CheapOair | Cheap Flig... | Search for Flights to D... | MU-Grazing Wedge

USDA NRCS

UNIVERSITY OF MISSOURI Extension

Grazing Wedge

- Home
- Pasture Based Dairies
- Conference
- Course
- Grazing Wedge
- Publications
- Protocols
- Resources
- Sharemilking
- History
- Contacts

Welcome

The grazing wedge is a key tool for managing feed on a pasture based dairy farm. It visually represents the quality and quantity of forage dry matter available both now and during the next round of grazing.

University of Missouri Extension developed an online grazing wedge calculator for producers. Users can set up an account, input their paddock measurements and add other key indicators of grazing management for their farm.

We recommend using using Internet Explorer or the Firefox browser to use all the tools provided on this site.

E-Mail Address:

Password:

Login

Create New Account

Forgot Password

Report Problems

User Guide

Visual Guide [pdf]

Search

Search the Public Grazing Wedges

1. Select Year 2016

2. Select Farm Choose Farm

3. Select Date Choose Date

Reset

Summary Table

Harvested Yield

Grazing Wedge

Year and Farm are required fields to view a year-to-date summary table or harvested yield to date table.

Year, Farm and Date are required fields to view a grazing wedge.

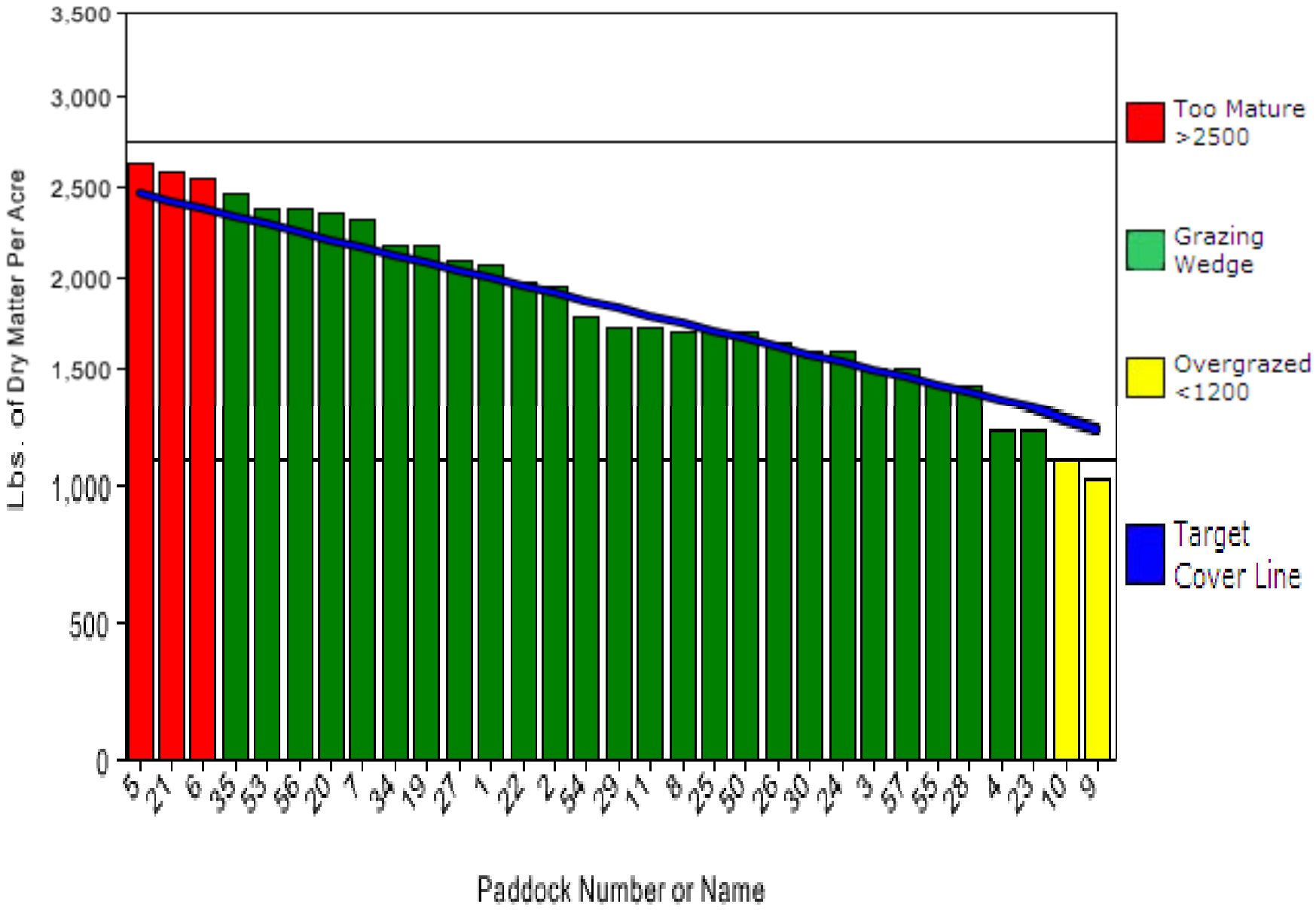
Revised: April 19, 2016

Web Address:
http://plantsci.missouri.edu/grazingwedge/

New Search
Add New Data
Edit Grazing Data
Report a Problem
Edit User Info
User Guide
Logout

Grazing Wedge
Edgewood Dairy
05/13/2008

Print All



NRCS

Paddocks are shown in order of greatest to least pasture cover.
Based on your minimum and maximum cover levels, colors are shown for too mature, in line with grazing wedge or overgrazed.

Growth rates can be calculated

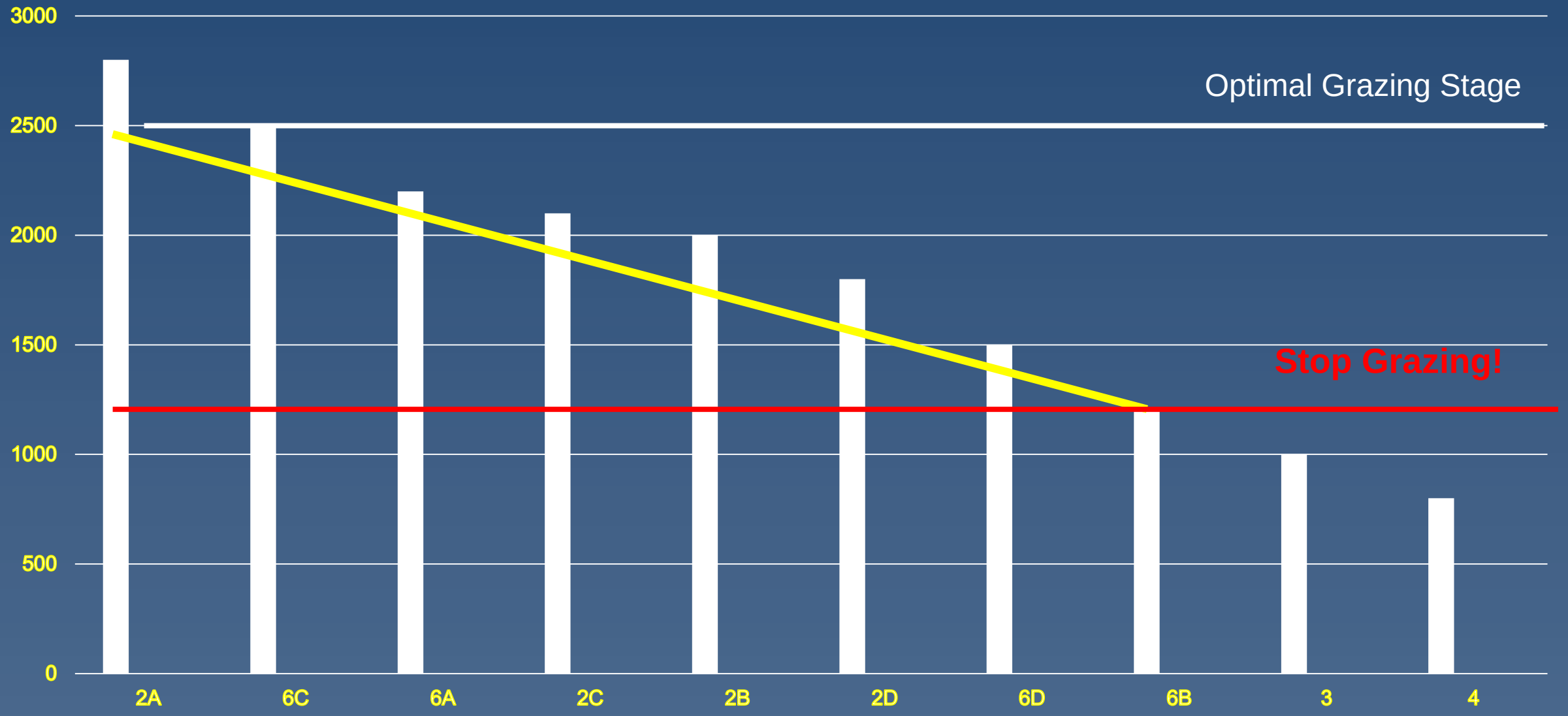
University of Missouri Extension

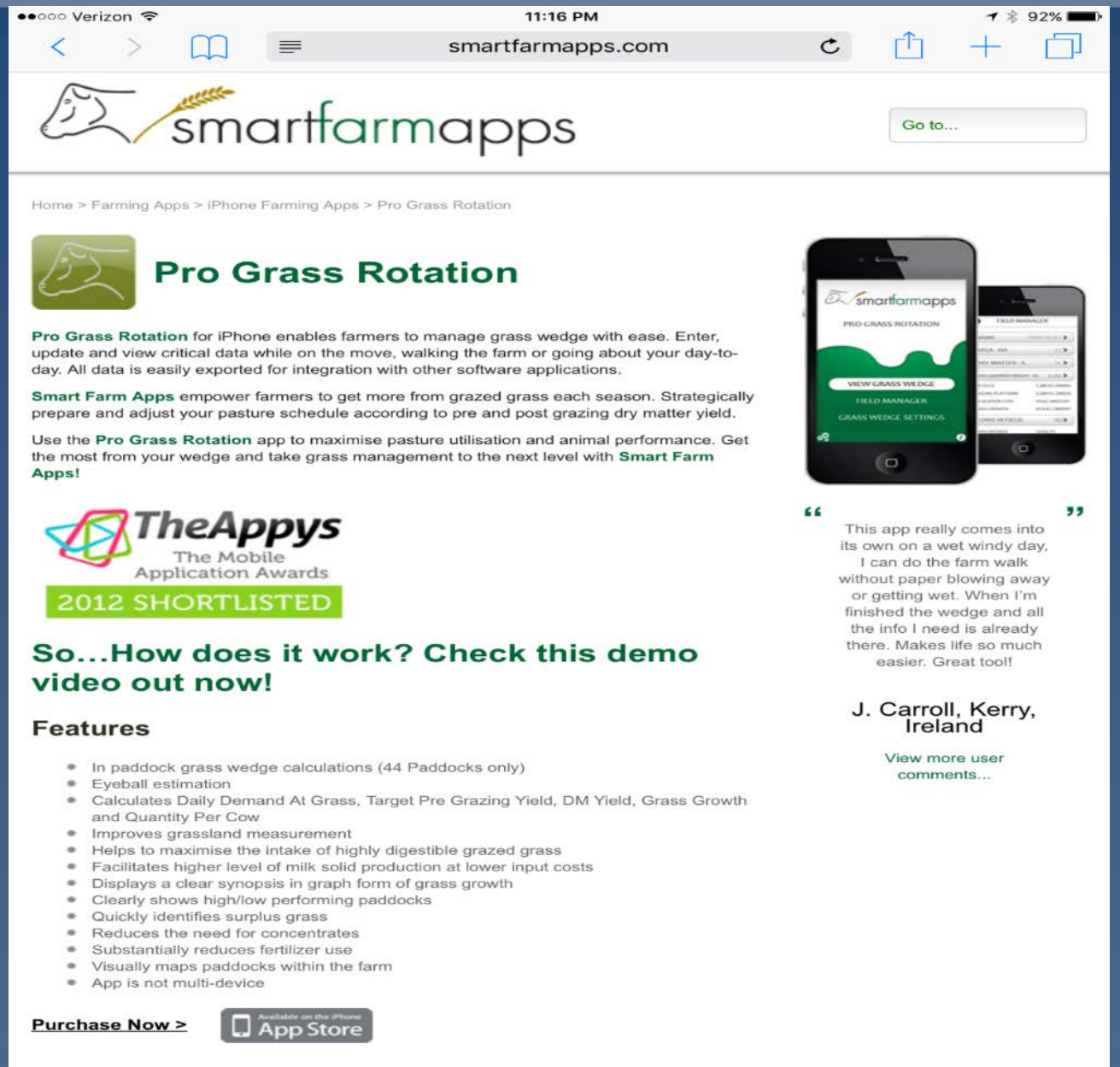

M
W
HcB
WfB
SwA
BzB
M
DeB
EaA
ScA
SwA
EaB
HcC
AcB
SnB
WfB
AcB
Sb
HcC
HcC
HaB
ScA
LrA
HcB
HaA
HaB
HaA
HaC
HaB
Gv
HcC
Sb
HcC
CfC
SnB
WdA
SwA
SwB
CfC
DeB
ScA
SwB
SwA
CfC
CfD
Sb
HcC

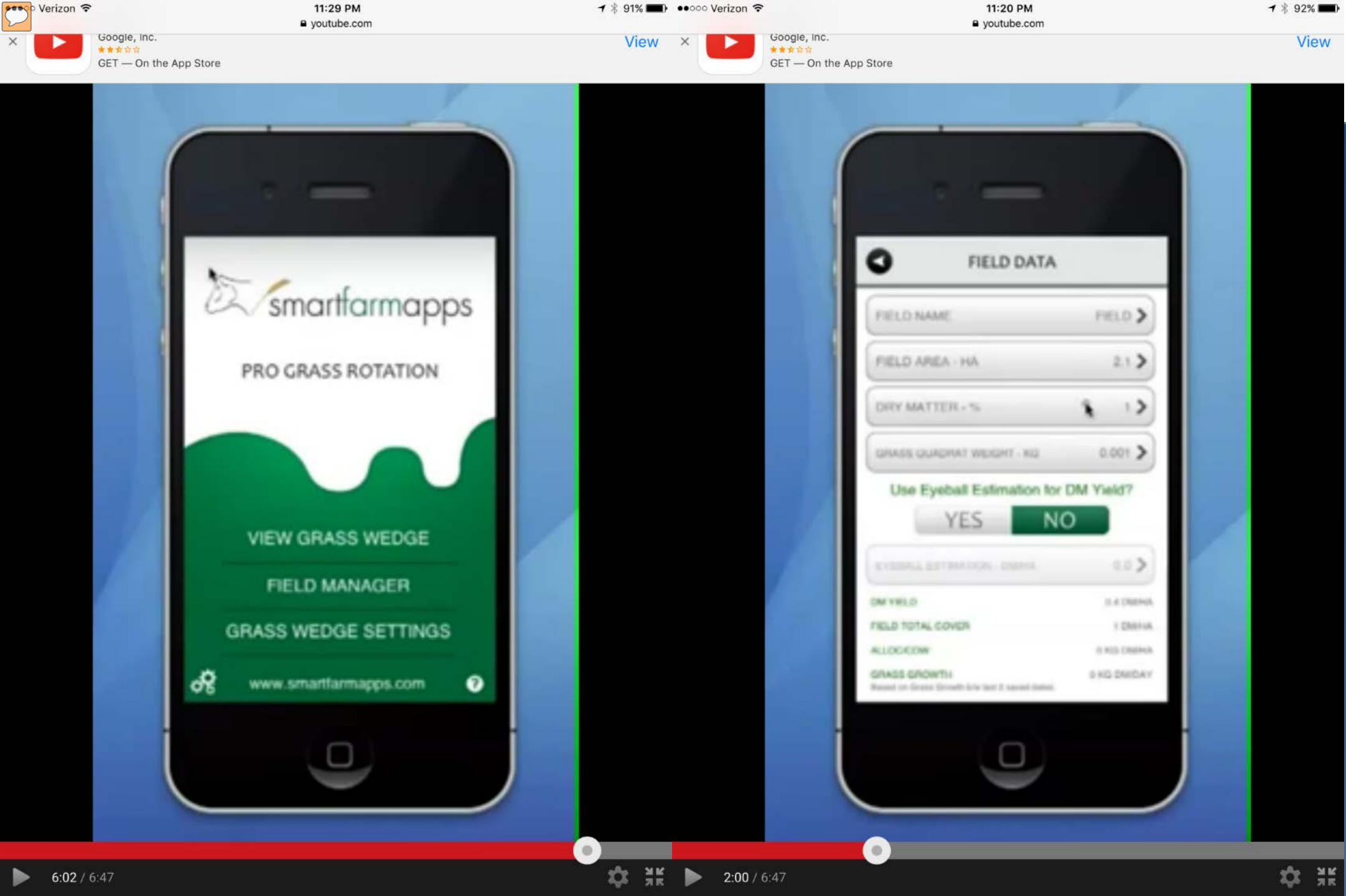
United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

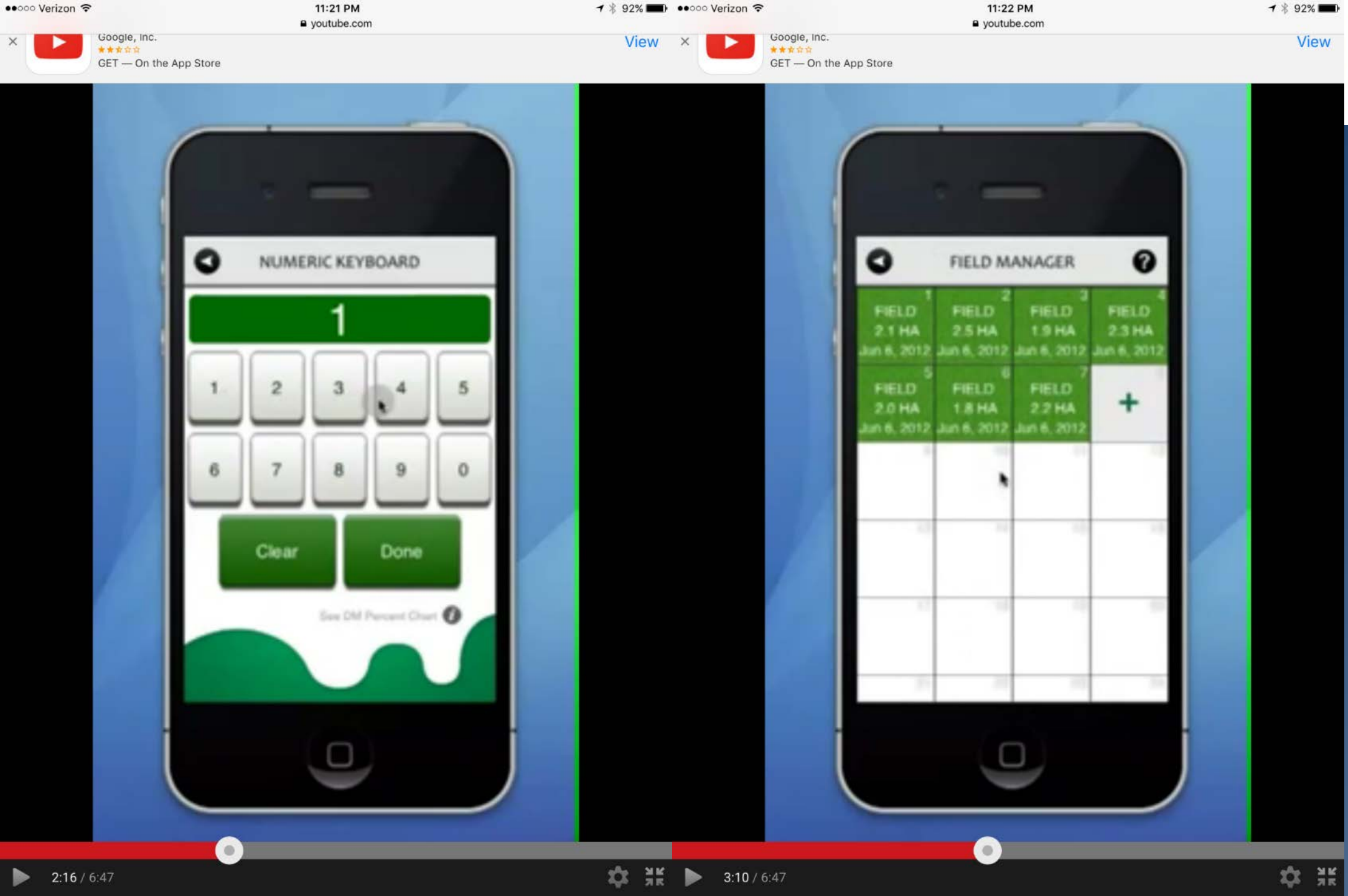
Grazing Wedge



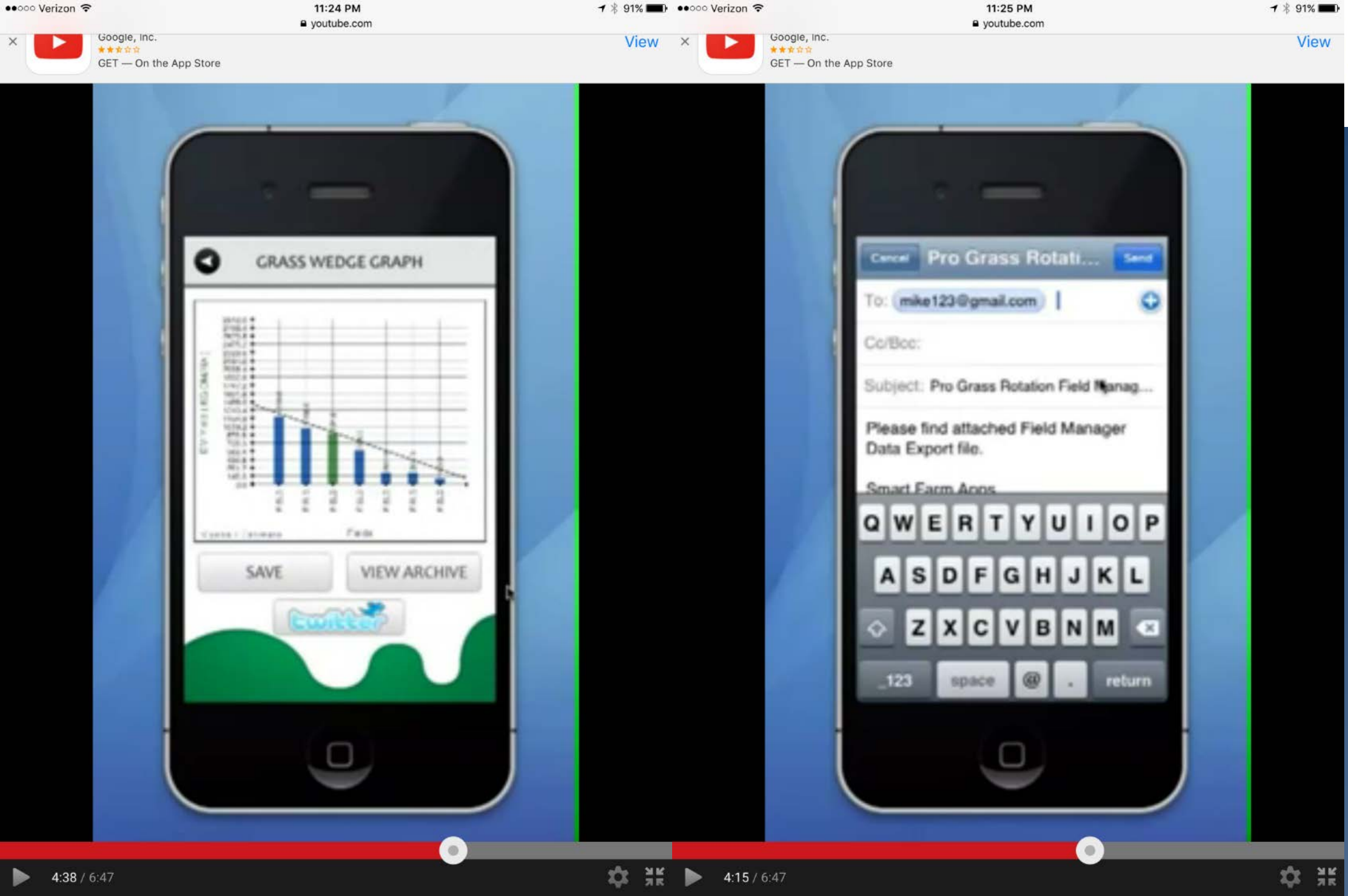

Verizon
11:16 PM
92%
smartfarmapps.com
smartfarmapps
Go to...
Home > Farming Apps > iPhone Farming Apps > Pro Grass Rotation
Pro Grass Rotation
Pro Grass Rotation for iPhone enables farmers to manage grass wedge with ease. Enter, update and view critical data while on the move, walking the farm or going about your day-to-day. All data is easily exported for integration with other software applications.
Smart Farm Apps empower farmers to get more from grazed grass each season. Strategically prepare and adjust your pasture schedule according to pre and post grazing dry matter yield.
Use the Pro Grass Rotation app to maximise pasture utilisation and animal performance. Get the most from your wedge and take grass management to the next level with Smart Farm Apps!
TheAppys
The Mobile Application Awards
2012 SHORTLISTED
So...How does it work? Check this demo video out now!
Features
In paddock grass wedge calculations (44 Paddocks only)
Eyeball estimation
Calculates Daily Demand At Grass, Target Pre Grazing Yield, DM Yield, Grass Growth and Quantity Per Cow
Improves grassland measurement
Helps to maximise the intake of highly digestible grazed grass
Facilitates higher level of milk solid production at lower input costs
Displays a clear synopsis in graph form of grass growth
Clearly shows high/low performing paddocks
Quickly identifies surplus grass
Reduces the need for concentrates
Substantially reduces fertilizer use
Visually maps paddocks within the farm
App is not multi-device
Purchase Now >
Available on the iPhone App Store
smartfarmapps
PRO GRASS ROTATION
VIEW GRASS WEDGE
FIELD MANAGER
GRASS WEDGE SETTINGS
“This app really comes into its own on a wet windy day, I can do the farm walk without paper blowing away or getting wet. When I'm finished the wedge and all the info I need is already there. Makes life so much easier. Great tool!”
J. Carroll, Kerry, Ireland
View more user comments...



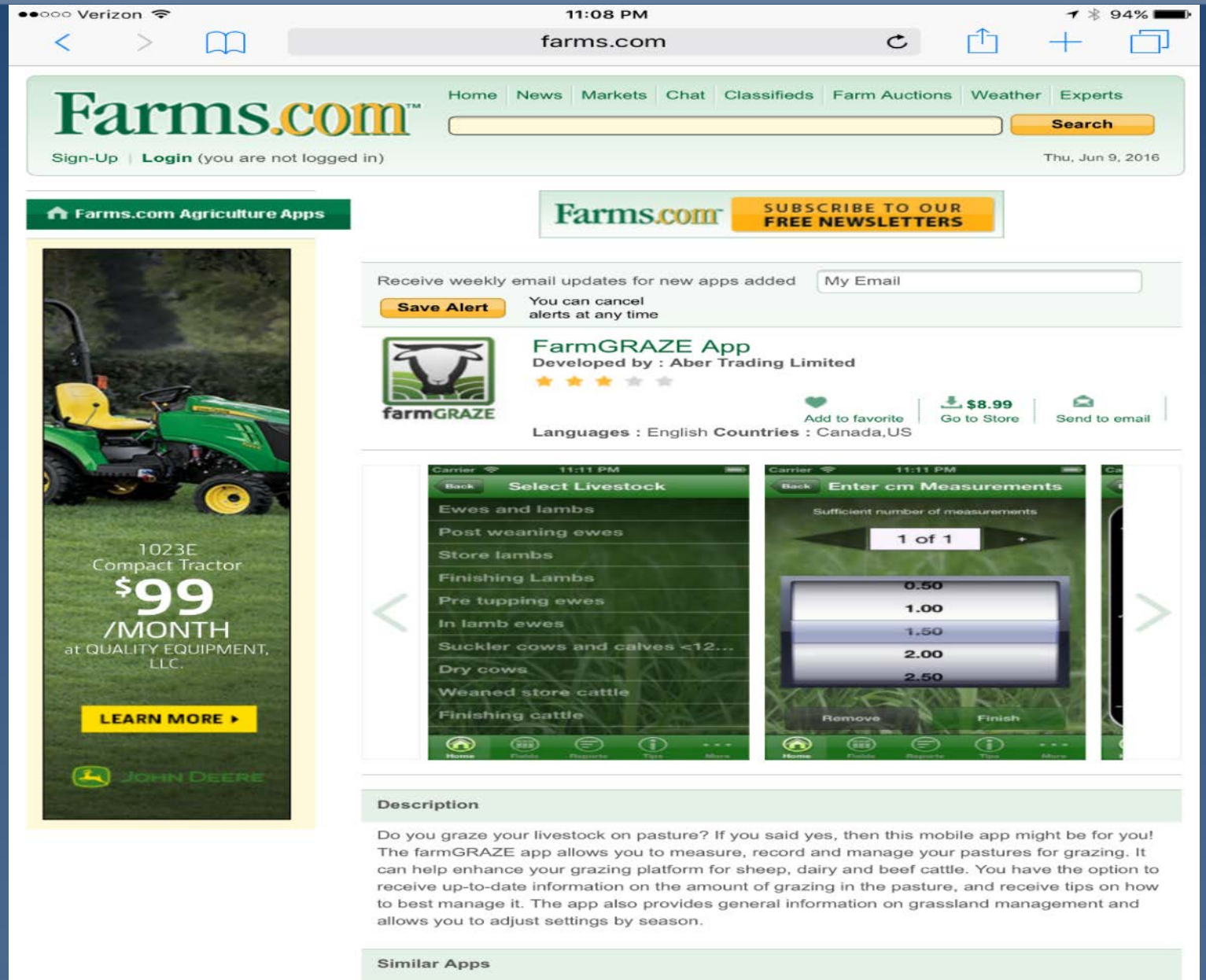
Pro Grass Rotation



Pro Grass Rotation



Pro Grass Rotation

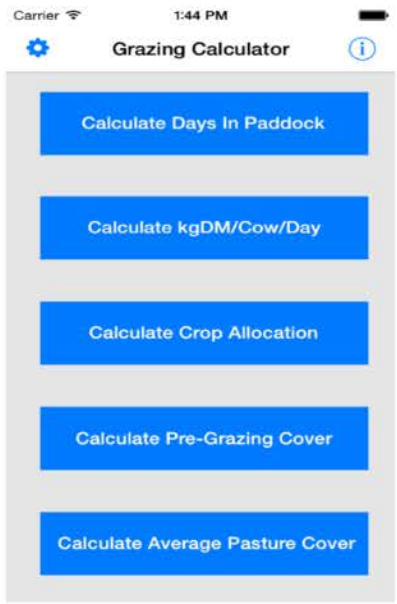

Verizon
11:08 PM
94%
farms.com
Farms.com
Home | News | Markets | Chat | Classifieds | Farm Auctions | Weather | Experts
Search
Sign-Up | Login (you are not logged in)
Thu, Jun 9, 2016
Farms.com Agriculture Apps
1023E
Compact Tractor
$99
/MONTH
at QUALITY EQUIPMENT, LLC.
LEARN MORE
JOHN DEERE
Farms.com SUBSCRIBE TO OUR FREE NEWSLETTERS
Receive weekly email updates for new apps added
My Email
Save Alert
You can cancel alerts at any time
FarmGRAZE App
Developed by : Aber Trading Limited
farmGRAZE
Add to favorite
$8.99
Go to Store
Send to email
Languages : English Countries : Canada,US
Select Livestock
Ewes and lambs
Post weaning ewes
Store lambs
Finishing Lambs
Pre tupping ewes
In lamb ewes
Suckler cows and calves <12...
Dry cows
Weaned store cattle
Finishing cattle
Enter cm Measurements
Sufficient number of measurements
1 of 1
0.50
1.00
1.50
2.00
2.50
Remove
Finish
Description
Do you graze your livestock on pasture? If you said yes, then this mobile app might be for you! The farmGRAZE app allows you to measure, record and manage your pastures for grazing. It can help enhance your grazing platform for sheep, dairy and beef cattle. You have the option to receive up-to-date information on the amount of grazing in the pasture, and receive tips on how to best manage it. The app also provides general information on grassland management and allows you to adjust settings by season.
Similar Apps

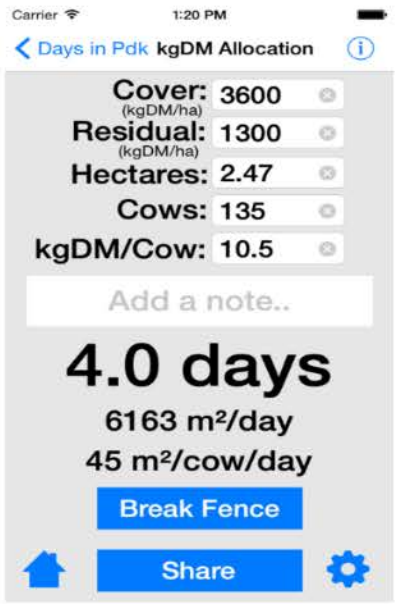
The Grazing Calculator app for Android and iOS phones provides a quick and easy way for dairy & beef farmers to calculate a number of common grazing

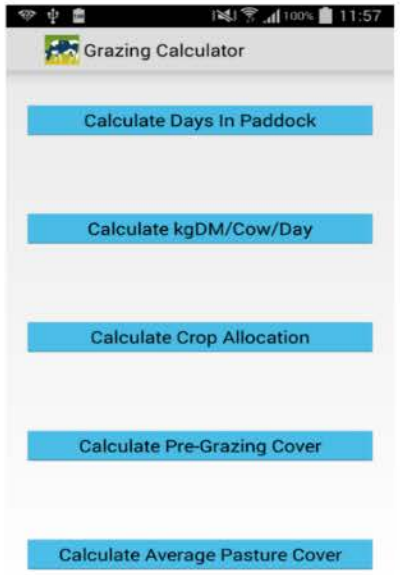
related equations.

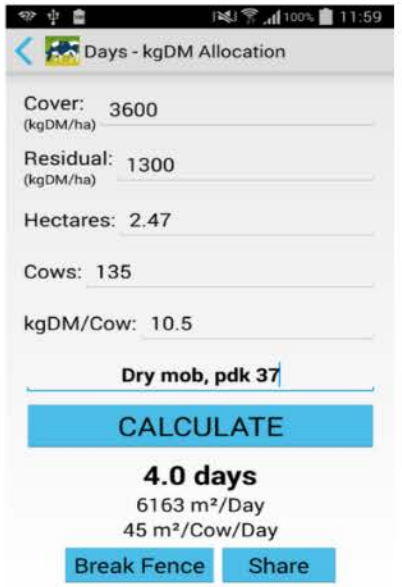
Grazing Calculator is the brainchild of a dairy farmer, who wanted a fast and easy way for him and his workers to be able to do grazing related calculations. This app was designed and developed in collaboration with his sister, with input from other farmers and farm advisors.

Designed to be used out on the farm and on the go, this app makes it quick, easy and simple for anyone working on a farm - regardless of their level of experience and knowledge - to get the numbers they need, when they need them.









Available on iTunes

GET IT ON Google play

Home **About Grazing Calculator**

A quick and simple way to calculate a number of common grazing related equations used by dairy and beef farmers.

This app is the brainchild of a dairy farmer, who wanted a fast and easy way for him and his workers to be able to do grazing related calculations. Designed and developed in collaboration with his sister, with input from other farmers and farm advisors.

Designed to be used out on the farm and on the go, this app makes it quick, easy and simple for anyone working on a dairy or beef farm - regardless of their level of experience and knowledge - to get the numbers they need, when they

1X

Grazing Calculator

- Calculate Days In Paddock
- Calculate lbDM/Cow/Day
- Calculate Crop Allocation
- Calculate Pre-Grazing Cover
- Calculate Average Pasture Cover

1X

Back to App Store 10:35 PM 98%

Days in Pdk lbDM Allocation

Cover: (lbDM/ac)	2500
Residual: (lbDM/ac)	1000
Acres:	1
Cows:	30
lbDM/Cow:	30

Previous Next CALCULATE

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
.	0	⌫

1X

Back to App Store 10:36 PM 98%

Days in Pdk lbDM Allocation

Cover: (lbDM/ac)	2500
Residual: (lbDM/ac)	1000
Acres:	1
Cows:	30
lbDM/Cow:	30

Add a note..

1.7 days

2904 yd²/day

96 yd²/cow/day

Break Fence

Share

1X

Back to Canopeo 1:27 PM canopeoapp.com 56%

Canopeo How it works! Applications About Contact Sign In

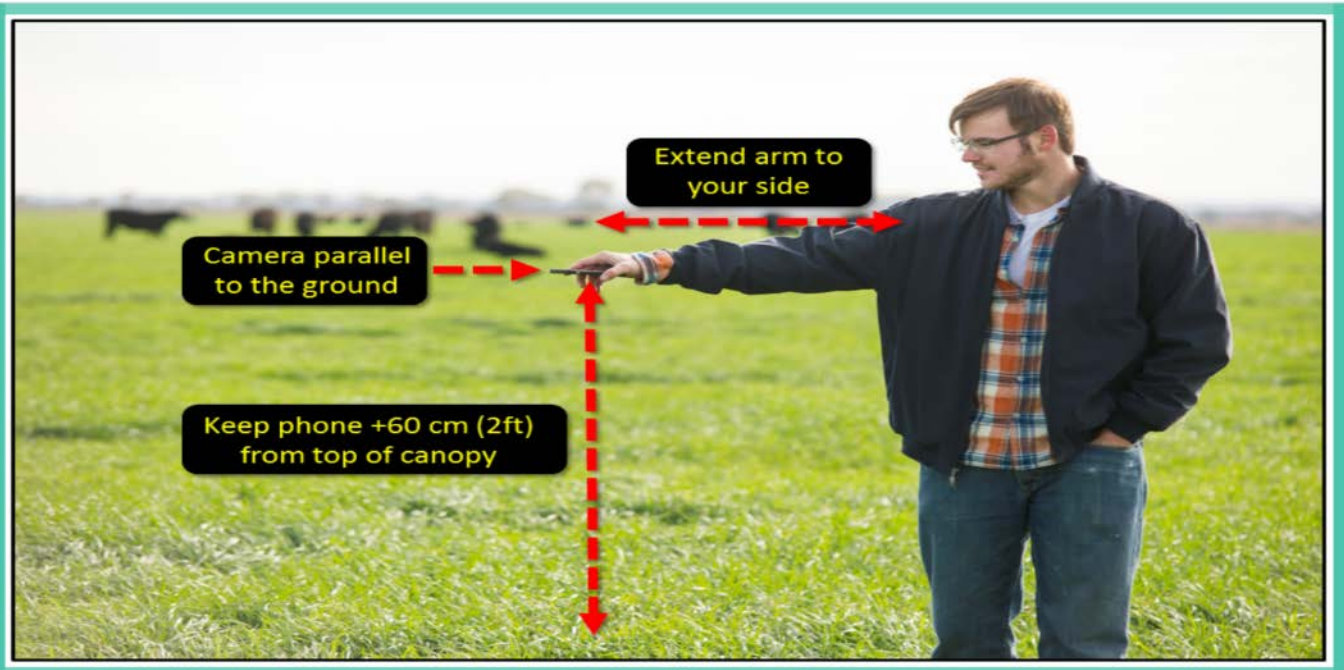
APPLICATION

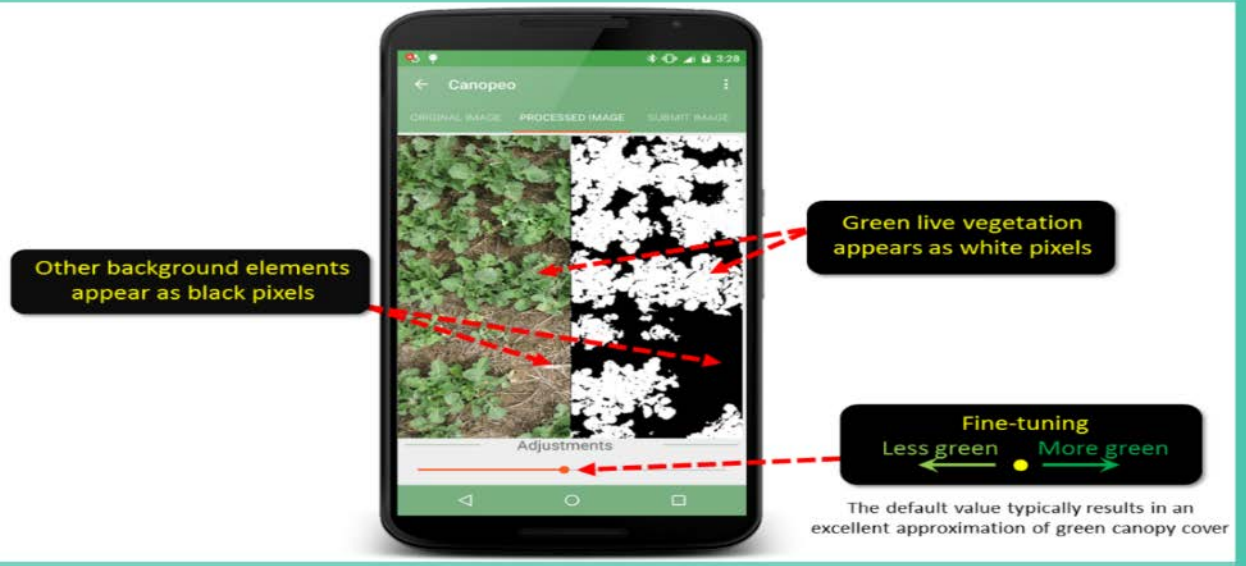
- Monitoring crop growth.
- Grazing management decisions.
- Quantify damage by hail, freeze, pathogens, and drought.
- Estimate crop light interception
- Easily collect, store, and access canopy cover data for scientific use (e.g. crop model calibration).
- Learn more.

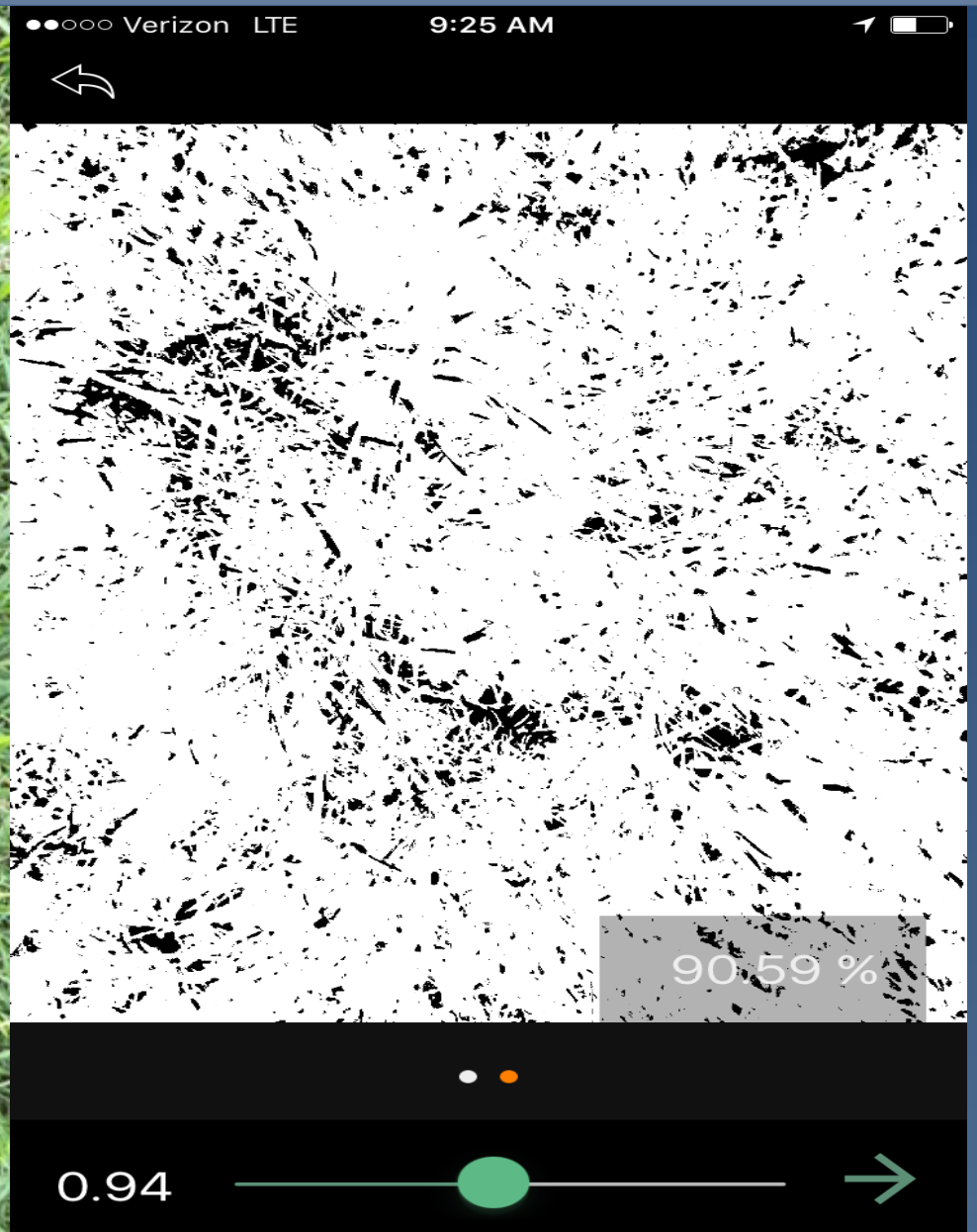
ABOUT US!

Back to Canopeo 1:26 PM canopeoapp.com 57%

Canopeo How it works! Applications About Contact Sign In






●●○○○ Verizon LTE
9:25 AM
90.59 %
0.94

Verizon LTE 4:57 PM 56%

grazekeeper.com

GrazeKeeper™ Features Pricing News Free 90-Day Trial Login

Planning and Record-Keeping System for All Livestock Grazing

Record Forage Production

Easily Measure Degree of Land Usage


Verizon LTE
4:48 PM
58%
vgs.arizona.edu
THE UNIVERSITY OF ARIZONA
Home
What is VGS
Sampling methods
General FAQ
Support
Downloads
Contact Us
VGS
Vegetation GIS Data System
What's New?
New Releases
Upcoming Events...
Get Support
Support FAQs
Visit the Forums / Ask a Question
Contact Us
On-line documentation and user guide
Software for recording and managing vegetation and other ecosystem related sampling data
Information and Support Site
Downloads
Support
Events
FAQs
The development of VGS is a cooperative effort between the University of Arizona and funding entities including USDA Forest Service (USFS), USDI Bureau of Land Management (BLM), USDI National Park Service (NPS) and the Public Lands Council.
VGS is widely used for vegetation inventories and monitoring, but is equally suited to customization for a variety of ecosystem or environmental data requirements.
Welcome to Vegetation GIS Data System
VGS is a software application for recording and managing vegetation and other ecosystem related data.
The application provides:
1. A data repository for organizing and managing data, photos, documents, positional coordinates and other information associated with an unlimited number of study sites or locations.
2. Electronic tools for recording data in the field (using tablet PCs) as well as historical data in the office.
3. Reports and tools for summary and presentation of results in the field and in the office. More
Search
Calendar
Forums
Support
Log in/Register
University of Arizona - Arizona Cooperative Rangeland Monitoring Program.
Copyright © 2015 Arizona Board of Regents. All rights reserved.

VGS Vegetation GIS data System

Software for recording and managing vegetation and related sampling data

Executive Summary

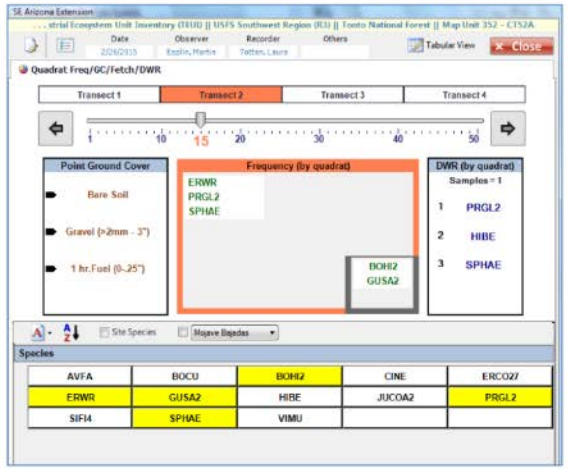
VGS is a free software application for recording and managing vegetation and other ecosystem or environmental sampling data. The application provides:

1) A data repository for organizing and managing data, photos, documents, positional coordinates and other information associated with an unlimited number of study sites or locations.

2) Electronic tools for recording data in the field (using tablet PCs) as well as historical data in the office.

3) Reports and tools for summary and presentation of results in the field and in the office.

Widespread interest has been generated because VGS generally meets the needs of both field personnel and administrative level managers. One reason for the success of VGS is that both office and field data entry forms are designed to fit specific combinations of sampling methods and forms in an efficient manner for a particular sampling protocol.



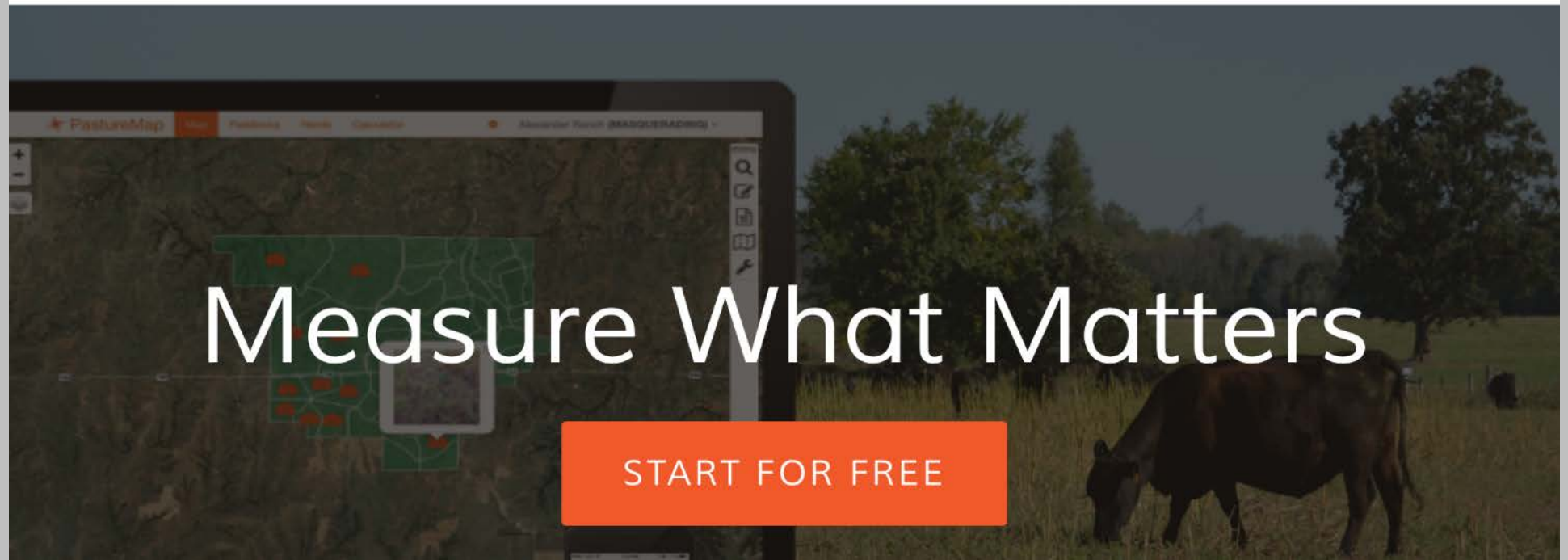
Example of Field Data Form: For maximum efficiency, field data forms are designed to: 1) meet user specifications for specific protocols; 2) minimize the amount of writing, clicking and scrolling when entering data and navigating forms; and 3) be sunlight readable.

The VGS software has been adopted for use by various government and university entities as well as private interests. It is widely used for vegetation inventories and monitoring, but is equally suited to a variety of ecosystem and environmental data requirements.

Users can generate forms for recording data for their own protocols by specifying the combination and order of data entry modules that appear on the forms in either a single or multi-form format. Each data entry module automatically displays the appropriate input panel (species, categories, classes, numeric keypad, etc.) when the module is selected for input. In general, the entire screen is dedicated to one point, quadrat or other sampling unit at a time which greatly reduces input errors and user fatigue. We can develop and add data entry modules to support protocols where existing modules do not meet requirements. For vegetation data, VGS implements the USDA PLANTS Database for species input, but smaller template lists may be created by the user for species and categories.

THE UNIVERSITY OF ARIZONA

- **Fencing Planning:** Create and subdivide fencelines with a few taps, calculate acres and perimeter
- **Grazing Records:** Record grazing moves and view recovery days
- **Monitoring:** Take GPS photos of monitoring points. Everything works even without cell signal, and syncs with your PastureMap account when you're back in signal range
- **Herd Management:** Track herd weights and average daily gains of each animal
- **Keep Records In The Field:** PastureMap works on your iPhone or iPad without cell signal! Everything syncs to your account when you get back within range.



Carrier 4:19 PM

Ben's Canyon | Move In | Edit

April 8, 2016 at 3:48 PM

Herds	Cows, Sheep
Available Dry Matter	2,700 lb/ac

Notes

The grass looks amazing, this should last five or six days.

Carrier 4:19 PM

George's Ranch +

Show pasture subdivisions

PASTURES

- Ben's Canyon — 25 rest days
- Big Strip 1 — 10 rest days
  - Middle
  - North
  - South
- Big Strip 2 — 44 rest days
- Bull Pasture
- Coyote in the tree
- Creek — 7 rest days
- Deerhead Road

Logout | Map

Carrier 4:21 PM

Cancel | Add Pasture | Done

Add more points or tap 'Done' if it looks good. Drag to adjust your fenceposts.

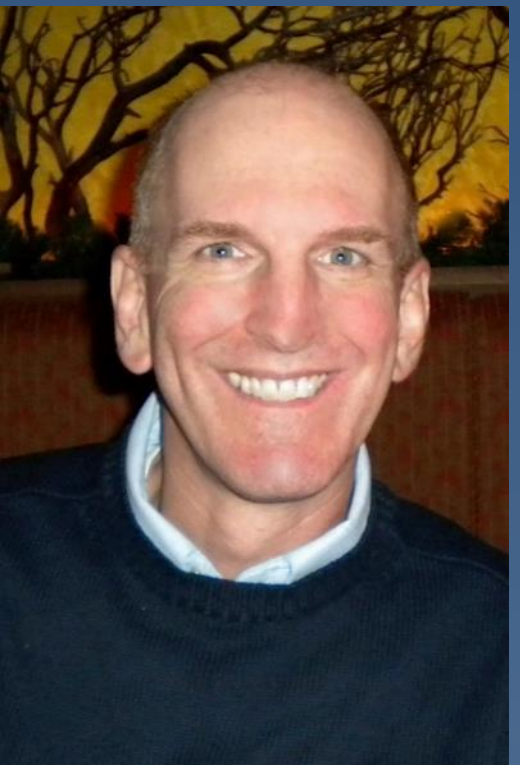
SUMMARY

- We need to keep records
- Not all landowners will have electronic records data and that's OK!
- Livestock producers and farmers are using dozens of different apps and software programs to keep records to improve their management.
- Good programs are being developed for NRCS to gather 'samples' of documentation data.
- NRCS goal is to simply capture the individuals record data.

United States Department of Agriculture
Natural Resources Conservation Service

USDA NRCS

Recording Keeping It's Not Just Spreadsheets Anymore



By Kevin Ogles
USDA NRCS ENTSC Grazing Lands Specialist
June 29, 2016 Webinar

Kevin.Ogles@gnb.usda.gov